



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

|  |             |                      |                              |                  |
|--|-------------|----------------------|------------------------------|------------------|
| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.          | CONFIRMATION NO. |
| 10/525,710   | 02/24/2005  | Burkhard Kroger      | 13111-00006-US               | 3746             |
| 23416 7590 03/12/2007<br>CONNOLLY BOVE LODGE & HUTZ, LLP<br>P O BOX 2207<br>WILMINGTON, DE 19899 |             |                      | EXAMINER<br>SAIDHA, TEKCHAND |                  |
|  |             |                      | ART UNIT                     | PAPER NUMBER     |
|  |             |                      | 1652                         |                  |
| SHORTENED STATUTORY PERIOD OF RESPONSE   |             | MAIL DATE            | DELIVERY MODE                |                  |
| 31 DAYS  |             | 03/12/2007           | PAPER                        |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/525,710

Applicant(s)

KROGER ET AL.

Examiner

Tekchand Saidha

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/24/05 &amp; 12/05/05</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.
2. This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.
3. In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-14, drawn to a method for the fermentative production of at least one sulfur-containing fine chemical comprising fermentation of a coryneform bacteria culture producing the desired sulfur-containing fine chemical, the coryneform bacteria expressing at least one heterologous nucleotide sequence which codes for a protein with O-acetylhomoserine sulphydrolase (metY) activity.

Group II, claim(s) 15-16, drawn to a method for producing L-methionine-containing animal feed additive from fermentative broths comprising the steps of claim 15, and microorganisms according to the definition of any of claims 1 to 14 are used.

For each of inventions I-II above, restriction to one of the following is also required. Therefore, election is required of one of inventions I-II; and one of the 27 inventions of met-Y encoding sequences of SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, and 53; and one of the 27 organisms of claim 4, corresponding to the elected sequence.

4. The inventions listed as Groups I-II, 27 DNA or nucleotide sequences and the corresponding 27 microorganism do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical feature for the following reasons: The technical feature linking Groups I-II appears to be that they all relate to met-Y encoding sequences.

According to the international preliminary examination report [IPER] claims 1-3 & 5-16 lack novelty as being anticipated by each of the document(s) D1 [WO 02/18613 A, (Degussa), March 7, 2002]; D2 WO 02/10206 A (Degussa), February 7, 2002] or D4 [WO 02/10209 A, (Degussa), February 7, 2002].

Document D1 discloses the production of 'sulfur-containing fine chemical' by fermentative preparation using metY gene coding for O-acetyl-L-homoserine sulfhydrylase (EC 4.2.99.10) in present in enhanced form or is over-expressed (See abstract). The reference also uses other polynucleotides (which are at least 70% identical) encoding the O-acetyl-L-homoserine sulfhydrylase of SEQ ID NO: 2. These polynucleotides (or DNA) from other sources which are at least 70% identical are considered heterologous (See pages 2-4). Suitable strains of *Corynebacterium* or *Brevibacterium* used for making L-methionine are listed on page 6-7, for example. The reference on pages 13-15 further describe increased L-lysine and/or L-methionine production by enhancement of one or more genes selected from a group consisting of gap gene which codes for glyceraldehydes 3-phosphate dehydrogenase; pgk gene which codes for 3-phosphoglycerate kinase; pyc gene (pyruvate carboxylase); lysC gene; metA (homoserine O-acetyltransferase), among several others. Method for the preparation of animal feed

Art Unit: 1652

additive comprising L-methionine using the fermentation of the L-methionine by *Corynebacterium* bacteria are also taught by the reference (See for example, claims 25 & 38-39). The teachings of D2 and D4 are described in detail in the international preliminary examination report [IPER] and are therefore not further described or argued here.

Therefore, Groups I-II and each of the sequences of SEQ ID NO: 1... through 53 and the corresponding organism share no special technical feature as defined by PCT Rule 13.2, as it does not define a contribution over the prior art. Furthermore, the methods of Groups I-II do not use the same DNA or produce the same level of sulfur-containing amino acid or L-methionine-containing animal feed. Accordingly, Groups I-II and one of the 27 inventions of met-Y encoding sequences of SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, and 53; and one of the 27 organisms of claim 4) are not so linked by the same or a corresponding special technical feature as to form a single general inventive concept.


5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tekchand Saidha whose telephone number is (571) 272 0940. The examiner can normally be reached on 8.30 am - 5.00 pm.

Art Unit: 1652

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on (571) 272 0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tekchand Saidha  
Primary Examiner, Art Unit 1652  
Recombinant Enzymes, E02A65 Remsen Bld.  
400 Dulany Street, Alexandria, VA  
Telephone: (571) 272-0940

March 5, 2007